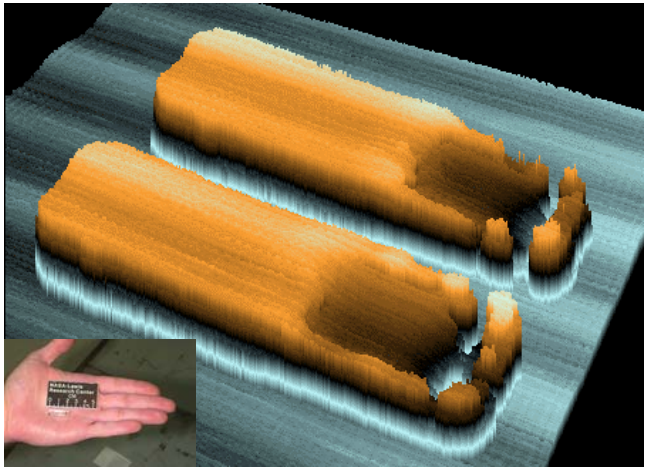
NASA Glenn Success Stories

Single Transducer Thickness-Independent Ultrasonic Imaging

Sonix, Inc.

TECHNOLOGY

Sonix, Inc. has used NASA technology to develop ultrasonic imaging systems, using surface topography, which are used worldwide for microelectronics, materials research, and commercial nondestructive evaluation.



STS-54 Space Experiment
Sample Burn Profiles

COMMERCIAL APPLICATION

- The imaging system is intended to profile over larger areas and larger depth depressions at higher speeds in comparison to the systems already available.
- Since the probe is an invisible airstream, almost all materials can be profiled by the new system with no fear of damage, ionization or invasion.
- Specific product improvement might be applicable to the following industries: biomedical, steel, specialty metals and ceramics, sports equipment and electronics.

SOCIAL / ECONOMIC BENEFIT

- The new imaging system in comparison to the competition is nondestructive, noninvasive, non-contact and does not bear the safety issues of lasers.
- The new system is also four times faster and covers an area five times larger than the competition, while remaining less expensive.

NASA APPLICATIONS

- In the aerospace industry it is critical to have this high-speed nondestructive imaging method, with large area coverage and excellent depth resolution, for the measurement of uniformity in coating thickness.

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